ICHTHYOLOGICAL NOTES (No. 4).

By J. Douglas Ogilby.

ORECTOLOBIDÆ.

ORECTOLOBUS TENTACULATUS Peters.[1]

In my "Check-List of Queensland Selachians"[2] I expressed a doubt as to whether the Port Adelaide and Cape York sharks recorded by Günther[3] under this name were identical, pointing out that the species had never been taken at any intermediate station. This doubt was, however, dispelled by the reception of a fine example forwarded from Port Darwin to this Museum by Mr. G. F. Hill.

STEGOSTOMA TYGRINUM (Bonnaterre).[4]

During Christmas week one of these sharks was captured at Southport, and forwarded to the Queensland University.

MOBULIDÆ.

MOBULA Rafinesque.

MOBULA EREGOODOO (Cantor).[5]

Through the kindness of Mr. J. Hirst Stevens, Inspector of Fisheries, the Museum became possessed of two fine examples, a male and a female, of this "horned ray," which had been exhibited in the Fisheries Court of the 1917 Agricultural Show. Since that time I know of a third specimen having been caught in Moreton Bay, but this was unfortunately lost to science, its captors, having brought it up the river as far as Pinkenba, deciding to jettison it. Though from the infrequency of its capture the species is but little known to our fishermen, whether professional or amateur, it is possibly by no means so rare as is generally supposed.

ARGENTINIDÆ.

RETROPINNA SEMONI (Weber).[6]

During the last week of April 1917 I had the good fortune to be asked to accompany Messrs. Aird (Waterworks) and Stevens (Inspector of Fisheries)

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[1] *Crossorhinus tentaculatus* Peters, Mon. Akad. Berlin, 1864, p. 123.

[2] Mem. Queensl. Mus., v, 1916, p. 76, footnote 15.

[3] Brit. Mus. Catal. Fish., viii, 1870, p. 414.

[4] *Squalus tygrinus* Bonnaterre, Encycl. Méth. Ichth., 1788, p. 8.

[5] *Dicerobatis eregoodoo* Cantor, Catal. Malay. Fish., 1850, p. 438.

[6] *Prototroctes semoni* Weber, Zool. Forsch., 1895, p. 274.

on a trip to the head waters of the Noosa River. The aim of the expedition was to test the possibilities of procuring from this source a sufficient quantity of Golden Perch (*Plectroplites ambiguus*)[7] to stock the new Gold Creek Reservoir. I may here remark parenthetically that, though we were successful in catching quite a number of these excellent fishes by trolling with a spoon-bait, we failed to bring any of them alive to Brisbane, a heavy thunderstorm which broke over the camp on the last night of our stay being doubtless a potent cause of their untimely decease. These and a single Long-finned Eel (*Anguilla reinhardtii*)[8] constituted the entire produce of our hook and line fishing. On arrival at the forks of the Upper Noosa, beyond which navigation is impossible, we noticed that the launch was quickly surrounded by numbers of small, high-swimming fishes. A few, a very few, of these, for they were lightning-quick in their movements, we managed to catch through the agency of some bread-crumbs and a small landing-net. They proved to be Crimson-spotted Sunfishes (*Melanotænia fitzroyensis*)[9] and Queensland Smelts (*Retropinna semoni*)[6] in the proportion of about three to one, thus adding another locality to the range of the latter interesting anadrom. On our way homewards we noticed a violent commotion in the water under an overhanging bank, and on investigating with a paddle we had the good luck to pick up four large and healthy River Jew-fishes (*Tandanus tandanus*),[10] the marriage ceremonies of which we had thus cruelly and wantonly interrupted. The trip through the water systems of the Lower and Upper Noosa and across Lakes Cooroiba and Cootharaba is most enjoyable, the scenery everywhere beautiful and romantic, wild and solitary; it can be earnestly recommended to anyone in search of health or pleasure. The clearness of the water in the upper reaches was responsible for a most exquisite and faithful reproduction of each leaf and bough of the overhanging trees, even the delicate fronds of the fragile "climbing maidenhair"[11] being photographed reversedly with a vivid intensity almost unbelievable, bringing back to one's mind Wordsworth's well-nigh forgotten duplicate swan.

MONOPTERIDÆ.

MONOPTERUS ? ALBUS (Zuiew)[12]

During last June I received from my good friend Mr. James Palmer of Cowan Cowan, Moreton Bay, a small but most interesting collection of fishes obtained by him at that place. It consisted of a very large *Nomeus gronovii*

[7] *Dules ambiguus* Richardson, Zool. Erebus & Terror, ii, 1844, Fish., p. 26, pl. xix.

[8] Steindachner, Sitz. Akad. Wien, lv, 1867, p. 15.

[9] *Atherina fitzroyensis* Castelnau, Proc. Linn. Soc. N. S. Wales, iii, 1878, p. 141.

[10] *Plotosus* (*Tandanus*) *tandanus* Mitchell, Exp. Int. East. Austr., ed. 2, i, 1838, p. 95, pl. v, fig. 2.

[11] *Lygodium scandens* (Swartz) Bailey, Queensl. Flora, vi, 1902, p. 1934.

[12] *Muræna alba* Zuiew, Nov. Act. Acad. Sci. Petropol., vii, 1797, p. 299, pl. vii, fig. 2.

(Gmelin),[13] measuring 128 mm., a *Psenes whitleggii* Waite,[14] two of the beautiful *Rhadinocentrus ornatus* Regan,[15] which appears to be confined to Moreton Island, and two of the above symbranchs. Though certain differences between these specimens and the descriptions of *M. albus* were perceptible, I considered it advisable, owing to the absence in this Museum of examples for comparison and the very small size (135 and 120 mm.) of this pair, to send them to Mr. McCulloch for further examination, and I give here the very interesting notes which he has kindly forwarded to me on the subject:—"An examination of your two small *Monopterus* does not enable me to identify them as *M. albus*, with three of which I have compared them. They appear generally similar, but the gill-opening is much farther back in your specimens; in *albus* it is in advance of the origin of the lateral line, and in yours well behind that point. I can think of no more satisfactory way of expressing the character. Again your specimens have distinct caudal rays, whereas the others have none, but this is perhaps due to their very small size. The teeth in your specimens are villiform, in a band in each jaw which is fairly wide anteriorly, but becomes very narrow laterally; they form a small forward projection at the premaxillary symphysis. They appear to be biserial on each palatine anteriorly, becoming uniserial posteriorly. They are evidently quite similar to those of *M. albus*."

The following table of comparative measurements is drawn up from the measurements of the five specimens kindly taken by Mr. McCulloch—following Day:—

	Batavia, 653 mm.	Malaysia, 512 mm.	Burma, 267 mm.	Moreton Bay, 135 mm. I. 17/2835.	Moreton Bay, 120 mm. I. 17/2836.
Head to head and trunk	9·5	9·25	8·83	6·5	6·5
Tail to total length	3·5	4·13	4·16	3·3	2·75
Eye to head	12·25	12·6	11·5	11·6	11·5
Eye to snout	2·25	2·4	2·25	2·13	2

This is the first record of the occurrence of this genus in Australian waters.

SILURIDÆ.

HEXANEMATICHTHYS AUSTRALIS (Günther).[16]

Some time ago the Museum received the head of a very large catfish belonging to this species, which had been caught in the Burnett River. In an MS. description of the "Estuary Catfish," drawn up from an examination of

[13] *Gobius gronovii* Gmelin, Syst. Nat., i, 1788, p. 128. I scarcely think it advisable to substitute the generic name *Gobiomorus* for that used here; v. Jordan, Guide to the Study of Fishes, ii, p. 285.

[14] Proc. Linn. Soc. N. S. Wales, xix, 1894, p. 218, pl. xvii, fig. 1.

[15] Trans. Zool. Soc. London, xx, 1914, p. 280, pl. xxxi, fig. 1.

[16] *Arius australis* Günther, Proc. Zool. Soc., 1867, p. 103, c. text-fig. of upper surface of head.

nine examples, measuring between 154 and 427 mm., I find that the proportional length of the body averages 1 to 3·4. On this basis the example in question would have measured fully 700 mm. to the end of the hypural bone and 925 to the tip of the caudal fin. Previous to this record the largest specimen of which I have a note was only 520 mm. long over all.

BELONIDÆ.

TYLOSURUS MACLEAYANUS (Ogilby).[17]

Through the generosity of Mr. J. Trevethan the Museum, during last October, became the recipient of the largest example of this needle-fish which I have as yet seen, its total length from the tip of the snout to the end of the lower caudal lobe being 1,013 mm. Following are some of the more important measurements taken from the fresh specimen:—Tip of snout to vent 686, width of body 70, depth of body 72, length of head 255, of postorbital head 73, of snout 172, diameter of eye 27, width of interorbit 46, lower caudal lobe 123 mm. I do not think *Tylosurus impotens*[18] can be separated from this species, notwithstanding that the maxillary is partly visible when the mouth is closed.

SERRANIDÆ.

CROMILEPTES ALTIVELIS (Cuvier & Valenciennes).[19]

A fine example of this northern species was taken recently by an angler at the "yellow patch," Moreton Bay, and presented to the Amateur Fishermen's Association, in whose collection it now is. The most southerly point from which it has previously been recorded is "Cairns Reef,"[20] which is located some miles south of Cooktown, the other known Australian stations being Darnley Island[21] and Port Essington.[22] This lucky capture, therefore, not only adds another interesting species to the fauna of our wonderful Bay, but extends the fish's southerly range by about 1,000 miles.

POMADASIDÆ.

PLECTORHYNCHUS RETICULATUS (Günther).[23]

In the last issued part of the Endeavour Fishes McCulloch described and figured this species from an unspecified New South Wales locality. About the same time a specimen, caught in Moreton Bay, came into my hands, and is now in the State Museum. There are now, therefore, four recorded Australian localities for this fish, namely—Cape York (Günther), Little Island, W. A. and New South Wales Coast (McCulloch), and Moreton Bay.

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[17] *Belone macleayana* Ogilby, Catal. N. S. Wales Fish., 1886, p. 53.

[18] Ogilby, Proc. Roy. Soc. Queensl., xxi, 1908, p. 89.

[19] *Serranus altivelis* Cuvier & Valenciennes, Hist. Nat. Poiss., ii, 1828, p. 324, pl. xxxv.

[20] McCulloch, *in lit.*

[21] Ogilby, Mem. Queensl. Mus., ii, 1913, p. 90.

[22] Boulenger, Brit. Mus. Catal. Fish., ed. 2, i, 1895, p. 272.

[23] *Diagramma reticulatum* Günther, Brit. Mus. Catal. Fish, i, 1859, p. 334.

SCOMBRIDÆ.

GRAMMATORYCNUS BICARINATUS (Quoy & Gaimard).[24]

In September, 1915, McCulloch described and figured a specimen of this fish which had been taken by trolling a few miles south of the Tweed Heads in June, 1914, this being the first record of its occurrence on the Coast of Eastern Australia. It was, therefore, with much pleasure that I recognised a fine specimen among the fishes exhibited in the Fisheries Court at the last Agricultural Show. This specimen was captured off Cape Moreton and, though presented to the Museum by the Inspector of Fisheries, was surreptitiously taken away and consumed by some unredited individual. Since then I have been shown by Mr. C. Dahl a drawing of a fish, taken off Moreton Bay by two Maitland sportsmen, using a trolling rod and line. In this figure not only is the double lateral line correctly shown, but the position of the vertical fins and the number of finlets are accurately given. It would, therefore, appear that this fish annually visits our offshore waters during the winter months, and that our failure hitherto to realise the presence of this and allied species is merely due to the lack of proper appliances for their capture.

TEUTHIDIDÆ.

TEUTHIS MATOIDES (Cuvier & Valenciennes).[25]

During the latter end of November 1917 the Museum received through the courtesy of Mr. A. A. Gilmour, manager of the State Fish Market, an exceptionally fine example of this fish, measuring no less than 444 mm. To one who only knows the species from preserved specimens the colours of the fresh fish were a revelation. The head and body were of the deepest imperial purple, shading to lilac on the breast and throat, while the outer fourth of the pectoral was brilliantly golden. The vertical fins, however, were without blue lines.

SCORPÆNIDÆ.

PTEROIS Cuvier.

Key to the Queensland species.

a^1. Pectoral fins extending beyond the base of the caudal (PTEROIS).

b^1. Interorbital region deep.

c^1. Genal ridge narrow and feebly spinose.

d^1. Supraorbital filament long ; nape naked .. .. 1. *volitans*[26]

d^2. Supraorbital filament short ; nape scaly .. .. 2. *lunulato*[27]

c^2. Genal ridge broad and densely spinulose.

e^1. Interorbital region deep; supraorbital filament moderate .. .. 3. *kodipungi*[28]

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[24] *Thynnus bicarinatus* Quoy & Gaimard, Voy. Uranie, Zool., 1824, p. 357, pl. lxi, fig. 1.

[25] *Acanthurus matoides* Cuvier & Valenciennes, Hist. Nat. Poiss., x, 1835, p. 204.

[26] *Gasterosteus volitans* Linnæus, Syst. Nat., ed. 10, i, 1758, p. 296 : Amboina.

[27] Schlegel, Faun. Japon., Pisc., 1842, p. 45, pl. xix : Nagasaki, Japan.

[28] Bleeker, Nat. Tijds. Nederl. Ind., iii, 1852, p. 450 : Banca.

a^2. Pectoral fins not extending to the caudal (DENDROCHIRUS).

f^1. Interorbital region broad and shallow; genal ridge broad and densely spinulose; supraorbital filament short .. .. 4. *miles*[29]

f^2. Interorbital region narrow and deep; genal ridge narrow and feebly spinose; supraorbital filament long .. .. 5. *zebra*[30]

CARACANTHIDÆ.

CARACANTHUS UNIPINNA (Gray).[31]

The reputed sclerodermi from the Banks Islands described by De Vis[32] as *Trachycephalus*[33] *bankiensis* proves on examination to be identical with the above fish. I am indebted for this determination to my friend and colleague Mr. Allan R. McCulloch, to whom I forwarded three examples under the impression that they were an aberrant *Gobiodon*. We do not consider the trivial character of the continuity of the dorsal fin sufficient justification for the removal of this fish to the special genus *Amphiprionichthys*.

Mr. McCulloch kindly sends me the synonymy of our genus and species, which may be advantageously inserted here:—

GENUS CARACANTHUS, Kroyer.

Micropus Gray, Zool. Misc., 1831, p. 20. (*M. maculatus* Gray). Not *Micropus* Wolf, 1810.

Caracanthus Kroyer, Naturhist. Tidsskr., i, 1844, p. 267. (*C. typicus* Kroyer); Jordan & Evermann, Bull. U. S. Fish. Comm., xxiii, i, 1905, p. 453.

Amphiprionichthys Bleeker, Nat. Tijds. Nederl. Ind., viii, 1855, p. 170 (*A. apistus* Bleeker).

Centropus Kner, Sitz. Akad. Wien, xxxix, 1860, p. 531 (*C. staurophorus* Kner). Not *Centropus* Illiger, 1811.

Crossoderma Guichenot, Nouv. Arch. Mus. Hist. Nat., v, 1870, p. 194. (*C. madagascariense* Guichenot).

Trachycephalus De Vis, Proc. Linn. Soc. N. S. Wales, viii, 1884, p. 455. (*T. bankiensis* de Vis) Not *Trachycephalus* Tschudi, 1838, *nec alio*.

Trachycephalus De Vis proves to be synonymous with *Caracanthus* Kroyer, and agrees with the subgenus *Amphiprionichthys* Bleeker in having the dorsal fins united.

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[29] *Scorpæna miles* J. W. Bennett, Fish. Ceylon, 1851, pl. ix: Ceylon.

[30] Cuvier & Valenciennes, Hist. Nat. Poiss., iv, 1829, p. 367: Mauritius.

[31] *Micropus unipinna* Gray, Zool. Misc., 1831, p. 20.

[32] Proc. Linn. Soc. N. S. Wales, viii, 1884, pp. 455, 456.

[33] De Vis was unfortunate in his choice of a generic name, *Trachycephalus* having been used thrice previously—by Tschudi in Batrachians 1838, by Swainson in Fishes 1839, and by Gray in Reptiles 1845.

CARACANTHUS UNIPINNA (Gray).

Micropus unipinna Gray, Zool. Misc., 1831, p. 20.
Amphiprionichthys apistus Bleeker, Nat. Tijds. Nederl. Ind., 1855, p. 170.
Centropus staurophorus Kner, Sitz. Akad. Wien, xxxix., 1860, p. 531.
Caracanthus apistus Bleeker, Atlas Ichth., ix, 1878, pl. cccexvi, fig. 5; Jordan & Evermann, Bull. U. S. Fish. Comm., xxiii, i, 1905, p. 454.
Trachycephalus bankiensis De Vis, Proc. Linn. Soc. N. S. Wales, viii, 1884, p. 456.

The three cotypes of *T. bankiensis* De Vis agree in all details with Bleeker's figure of *C. apistus*, which is apparently synonymous with *C. unipinna*.

Loc.:—Banks Islands, northern New Hebrides. The species ranges from Zanzibar to Hawaii.

PLATYCEPHALIDÆ.

PLATYCEPHALUS MARMORATUS Stead.[34]

While snappering in the winter of 1917 I was fortunate enough to obtain a fine specimen of this handsome flathead, this being the first record of its occurrence in Queensland waters. It was captured on the outer bank off Caloundra.

TETRAODONTIDÆ.

SPHEROIDES MULTISTRIATUS (Richardson).[35]

In a previous number of these "Memoirs"[36] I described a specimen of this rare toadfish, which had been forwarded from Townsville to the Queensland Museum. Last winter, when on a snapper trip to the Caloundra Banks, I was both surprised and pleased, on making my usual tour of inspection at the termination of a drift, to find a large example of this species lying discarded on the deck, having evidently been thrown aside as worthless; it was incontinently commandeered.

CERATODONTIDÆ.

The Queensland Museum has lately received, through Mr. A. A. Gilmour, Manager of the State Fish Market, a specimen of *Neoceratodus*[37] *forsteri* from the Coomera River, which measures only 495 mm., and thus definitely proves that the fishes introduced by the late Mr. D. O'Connor on Aug. 29, 1896, are breeding in that river; these fishes ranged from 33 to 45 in. in length. This gives us some hope that they are similarly reproducing their species in the other waters in which they were placed about the same time. The history of these liberations may profitably be given here in Mr. O'Connor's own words[38]:—"On May 7, 1895, eight were put in the North Pine River about a mile above tidal influence. The next, a lot of five, were on the 17th of November placed in a lagune near the Albert River, on the property of Messrs. Collins and Sons. On the 15th December I took eight to Mr. D. C. McConnel and Sons, Cressbrook; these were

[34] New Fishes from New South Wales, 1908, p. 9, pls. iii to v.

[35] *Anchisomus multistriatus* Richardson, Voy. Herald, 1854, p. 160, pl. xxix.

[36] Vol. iii, p. 128.

[37] *Epiceratodus* Teller, Abh. Geol. Reich., xv, 1891, Heft. 3 is antedated fifteen years by *Neoceratodus* Castelnau.

[38] Proc. Roy. Soc. Queensland, xii, 1897, p. 101-2.

liberated in a dam, which communicates with the Brisbane River. On returning from a visit to New Zealand I recommenced the work, and on the 28th of May liberated eighteen in the Enoggera Reservoir. Twenty-one were taken to Warwick on the 31st of July and put in the Condamine. On the 29th of August sixteen were liberated in the waters of the Upper Coomera. Two were on the same day placed in a pond at the Botanical Gardens."[39] I have records of several specimens from the Pine and Coomera Rivers, of one from the Enoggera Dam, and of one from the Condamine having been killed. It is much to be regretted that, after all the trouble and expense which has been incurred to transplant these unique fishes to new homes, they are relentlessly destroyed when opportunity offers. It may be useful here to remind my readers that these fishes are now protected by law, and that their destruction is, therefore, a punishable offence. Such as are caught should at once be returned to the water. In this case, however, Mr. Whalley, its captor, informs me that the fish was taken in salt water at the mouth of the river; when first seen it was lying outside the net, and appeared to be sick and unable to help itself, so that he lifted the net and pushed it under with an oar; evidently its condition was due to the salinity of the water.

ADDENDA.

TORPEDINIDÆ.

HYPNOS SUBNIGER Duméril.[40]

Through the courtesy of Mr. J. Hirst Stevens, Inspector of Fisheries, the Queensland Museum has acquired a very fine female example of this electric ray, which formed one of the exhibits in the Fisheries Court of the National Show, 1918, and was an object of much curiosity and no little scepticism—as regards its shock-giving proclivities—to thousands of interested sight-seers. It was captured by seine net at Cape Moreton by Mr. George Crouch and party, and measures 572 mm. from the tip of the snout to that of the tail. This is the fourth recorded Queensland occurrence, the others being[41] *a*, a young female, labeled Moreton Bay, belonging to the Old Collection of the Queensland Museum; *b* and *c*, an immature pair, male and female, trawled by the Endeavour in 13 fathoms on fine dark sand off South Hill.

CARANGIDÆ.

APOLECTUS NIGER (Bloch).[42]

During August the Queensland Museum received a fine specimen of this fish, measuring 380 mm. in total length and weighing slightly over five pounds. For this noble addition to our marine fauna I have again to thank the acumen of the officers of the State Fish Market who, recognizing that it was a novelty, at

[39] See also — Bancroft, Proc. Roy. Soc. Queensl., xxiii, 1912, p. 251 & ibid., xxx, 1918, p. 91.

[40] Rev. & Mag. Zool., 1852, p. 279.

[41] See Ogilby, Mem. Queensl. Mus., v, 1916, p. 83.

[42] *Stromateus niger* Bloch, Ausl. Fisch., xii, p. 93, pl. ccccxxii.

once put it aside for my inspection. The fish was taken in the Coomera River by Messrs. Brady Bros. on the 14th inst., and is the first recorded instance of its occurrence in Australian waters.

SPARIDÆ.

SPARUS BERDA Forskål.[43]

On the 24th inst., when paying my weekly visit to the Fish Market, I was shown a small bream, which had been taken along with the ordinary species at Caloundra, and was surprised and delighted to recognize in it a representative of the northern "pikey bream," of which the most southerly previous record was that of Macleay from the Lower Burdekin. Possibly the species may not be so rare as is supposed, but has been confounded with the common bream (*S. australis*).[44] From this and the tarwhine (*S. sarba*)[45] it is at once distinguishable by the great size and strength of the second anal spine, which has suggested the vernacular name here employed.

SCOMBRIDÆ.

GRAMMATORYCNUS BICARINATUS (Quoy & Gaimard).[46]

During the first week of August, when paying a visit to the State Fish Market, I was shown a specimen of this fish, weighing 30 lb., which was caught in the Bay in company with School Mackerel (*Scomberomorus* spp.)

URANOSCOPIDÆ.

ICHTHYSCOPUS LEBECK (Schneider).[47]

To Mr. J. Tait, of Tewantin, the Museum is indebted for an exceptionally large example of this "stargazer," measuring 542 mm. in total length. On opening it the stomach was found to be filled to repletion with the remains of other fishes, some of which, on the evidence of the bones, must have been of considerable size. The specimen was a female, and the ovaries contained eggs in an advanced stage of maturity. These are exceedingly small for the size of the fish, so much so that I considered it worth while attempting to compute the number of ova about to be shed by this specimen. The mass of eggs weighed exactly 7 oz., and by carefully removing a portion weighing one sixty-fourth of an ounce (3 grs.), and washing this out until each ovum became separated from its fellows, I arrived by careful counting at 1,160 eggs for the 3 grs., which when multiplied by 448 gives the astonishing total of 519,680. Mr. Longman, who made his calculations by a somewhat different method to that employed by me, arrived at a total of slightly under half a million, a difference quite inappreciable when dealing with figures of such magnitude.

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[43] Descr. Anim., 1775, p. 32. See also remarks under *S. latus* by Jordan & Thompson, Proc. U.S. Nat. Mus., xli. 1912, p. 585-6.

[44] *Chrysophrys australis* Günther, Brit. Mus. Catal. Fish., i, 1859, p. 494.

[45] Forskål, ibid., p. 31. See remarks under *S. aries* by Jordan & Thompson, ibid., p. 483.

[46] See p. 101 antea.

[47] *Uranoscopus lebeck* Schneider, in Bloch, Syst. Ichth., 1801, p. 47.